

Title (en)
RADIOISOTOPE PRODUCTION TARGET INSERT DESIGN AND TARGET HARVESTING METHODOLOGY FOR LONG TERM IRRADIATION IN COMMERCIAL NUCLEAR REACTORS

Title (de)
ZIELEINSATZDESIGN FÜR RADIOISOTOPENHERSTELLUNG UND ZIELENTNAHMEVERFAHREN FÜR LANGZEITBESTRAHLUNG IN KOMMERZIELLEN KERNREAKTOREN

Title (fr)
CONCEPTION D'INSERT CIBLE DE PRODUCTION DE RADIO-ISOTOPE ET MÉTHODOLOGIE DE COLLECTE DE CIBLE POUR UNE IRRADIATION À LONG TERME DANS DES RÉACTEURS NUCLÉAIRES COMMERCIAUX

Publication
EP 3625804 A4 20210303 (EN)

Application
EP 18802351 A 20180424

Priority
• US 201715596024 A 20170516
• US 2018029036 W 20180424

Abstract (en)
[origin: US2018336975A1] A device and method that enables a specimen that is to be converted into a radioisotope to be inserted into an extended, retractable thimble of a nuclear reactor moveable in-core detector system and be harvested after irradiation either during reactor operation or a refueling outage without damaging the retractable thimble. The specimen is enclosed within the interior of a forward portion of a tubular member having a closed lead end and structured to travel within the retractable thimble. The tubular member is sized to extend from a position above and proximate the desired core elevation the specimen is to be irradiated at to a location above a seal table that the retractable thimble extends through. The specimen is inserted and withdrawn from the core by inserting or withdrawing the tubular member from above the seal table. Desirably, the forward end of the tubular member is divided into several specimen compartments.

IPC 8 full level
G21G 1/02 (2006.01); **G21C 23/00** (2006.01); **H05H 6/00** (2006.01)

CPC (source: EP KR US)
G21C 23/00 (2013.01 - EP US); **G21G 1/0005** (2013.01 - US); **G21G 1/02** (2013.01 - EP KR US); **H05H 6/00** (2013.01 - KR); **G21C 17/108** (2013.01 - EP US); **Y02E 30/30** (2013.01 - EP)

Citation (search report)
• [YA] WO 2016007197 A1 20160114 - WESTINGHOUSE ELECTRIC CORP [US]
• [YA] US 2011051874 A1 20110303 - ALLEN MELISSA [US], et al
• See references of WO 2018212942A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 10923242 B2 20210216; US 2018336975 A1 20181122; EP 3625804 A1 20200325; EP 3625804 A4 20210303; EP 3625804 B1 20230315; KR 102367047 B1 20220223; KR 20190142423 A 20191226; WO 2018212942 A1 20181122

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US 201715596024 A 20170516; EP 18802351 A 20180424; KR 20197037040 A 20180424; US 2018029036 W 20180424